LineUp With Math™ Alignment
Mathematics Content Standards and Performance Standards (Grade Level Expectations) [PSGLEs]
Fourth Edition – March 2006

Content Standard A: Mathematical Facts, Concepts, Principles, and Theories

Content Strand: Measurement

Measurement Techniques

PSGLE	***LineUp With Math*™ Activities**
The student demonstrates ability to use measurement techniques by **[9] MEA-2** applying indirect methods, such as the Pythagorean Theorem to find missing dimensions in real-world applications (M2.4.4)	--Identify and resolve distance, rate, time conflicts in air traffic control problems by varying plane speeds or changing plane routes.

Content Strand: Estimation and Computation

Estimation:

PSGLE	***LineUp With Math*™ Activities**
The student solves problems (including real-world situations) using estimation by **[9] E&C-1** judging whether the strategy will result in an answer greater or less than the exact answer (M3.4.1)	--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.

Computation:

PSGLE	***LineUp With Math*™ Activities**
The student accurately solves problems (including real-world situations) by **[9] E&C-4** determining rate by using ratio and proportion (M3.4.5)	--Use an interactive simulator plus calculation worksheets to apply proportional reasoning to identify and resolve distance, rate, time conflicts in air traffic control.

Content Standards B, C, D, and E: Process Skills and Abilities

Content Strand: Problem Solving

PSGLE	***LineUp With Math*™ Activities**
The student demonstrates an ability to problem solve by **[9] PS-1 s**electing, modifying, and applying a variety of problem-solving strategies (e.g., charts, graphing, inductive and deductive reasoning, Venn diagrams, and verifying the results (M7.4.2)	--Choose and apply a variety of strategies to optimize the solution of air traffic control conflicts.

[9] PS-2 evaluating, interpreting, and justifying solutions to problems by using an alternative strategy (M7.4.3)	--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations. --Explore and apply a variety of strategies to optimize the solution of air traffic control conflicts.

Content Strand: Communication	
PSGLE The student communicates his or her mathematical thinking by **[9] PS-3** representing mathematical problems numerically, graphically, and/or symbolically, translating among these alternative representations; or using appropriate vocabulary, symbols, or technology to explain, justify, and defend strategies and solutions (M8.4.1, M8.4.2, & M8.4.3)	***LineUp With Math™* Activities** --Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations. --Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.

Content Strand: Reasoning	
PSGLE The student demonstrates an ability to use logic and reason by **[9] PS-4** following and evaluating an argument, judging its validity using inductive or deductive reasoning and logic; or making and testing conjectures (M9.4.1 & M9.4.2)	***LineUp With Math™* Activities** --Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.

Content Strand: Connections	
PSGLE The student demonstrates the ability to apply mathematical skills and processes across the content strands by **[9] PS-5** using real-world contexts such as science, humanities, peers, community, careers, and national issues (M10.4.1 & M10.4.2)	***LineUp With Math™* Activities** --Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.